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PEACH MOSAIC

how
we
fight
it



PA 336

U. S. DEPARTMENT
OF AGRICULTURE

PEACH MOSAIC how we fight it



Peach mosaic, a virus disease, first appeared in the United States in 1931. From 1931 to 1956 it caused more than \$10 million worth of damage to peach orchards in this country. In this time it ruined about 400,000 peach trees.

Peach mosaic is found in the peach-growing areas of Texas, Colorado, California, Utah, Arizona, New Mexico, Oklahoma, and Arkansas, and in three states in Mexico. Control measures are necessary to keep the disease from spreading to uninfected areas, and to reduce damage in areas where it is established.

Control of peach mosaic is a cooperative undertaking of growers, nurserymen, counties, States, and the Plant Pest Control Division, U. S. Department of Agriculture. The control work was started in 1935; since then peach mosaic has apparently been eliminated from 24 counties in California, Colorado, Utah, Texas, and Arkansas. The overall percentage of infected trees was reduced from 4.16 percent in 1935 to 0.25 percent in 1955.

DAMAGE AND SYMPTOMS

Peach mosaic reduces the amount and quality of fruit produced by a tree; more than 50 percent of the fruit may be ruined. Infected trees do not recover from the disease, and they are a source of infection to other trees as long as they stand. Freestone varieties, such as Elberta and J. H. Hale, are the most severely affected.

Easily recognized symptoms of peach mosaic are: Mottling that crosses the veins in the leaves; rough, bumpy fruit (in some varieties); retarded development of foliage; and shortened internodes (spaces between leaves or between stems). Some varieties of peach and plum are infected without showing any symptoms; they are still sources for spread of the disease.

HOW IT IS SPREAD

Peach mosaic is spread to healthy peach trees from diseased trees. Besides the peach, other trees that are hosts are: Nectarine, almond, apricot, prune, and wild and cultivated plum.

The disease is spread to healthy trees in two main ways—(1) by using buds or grafts from infected trees and (2) by a mite of the Eriophyid group.

This mite vector (or disease transmitter) was discovered in the summer of 1955 after 17 years of research. Its life cycle and a method for its control have not yet been discovered.

During the winter, this mite lives under bud scales on peach trees and wild plum trees. In the spring and early summer, when the bud

scales are shed, the mite is apparently scattered from tree to tree by air currents. One mite, after feeding on a mosaic-infected tree, can transmit the disease to a healthy tree after only 48 hours of feeding on the healthy tree.

Natural spread of the disease occurs throughout the growing season; it is greatest during April, May, and June.

Peach mosaic is not spread by mechanical contact (such as pruning), by irrigation water, or by soil.

CONTROL MEASURES

Quarantine

The Federal Government assists the affected States in maintaining uniform State quarantines to keep peach mosaic from spreading. Nurseries may sell only stock and budwood that is free of peach mosaic. Only nursery stock and budwood produced and handled in compliance with State quarantine requirements may be certified for movement inside or outside the quarantine area.

MOTTLING OF LEAVES

A. Spring. Various types of mottling in leaves from mosaic-infected trees.

B. Early summer. Mottled and deformed leaves on twig at right. Normal leaves on twig at left.

BN-3491, BN-3495

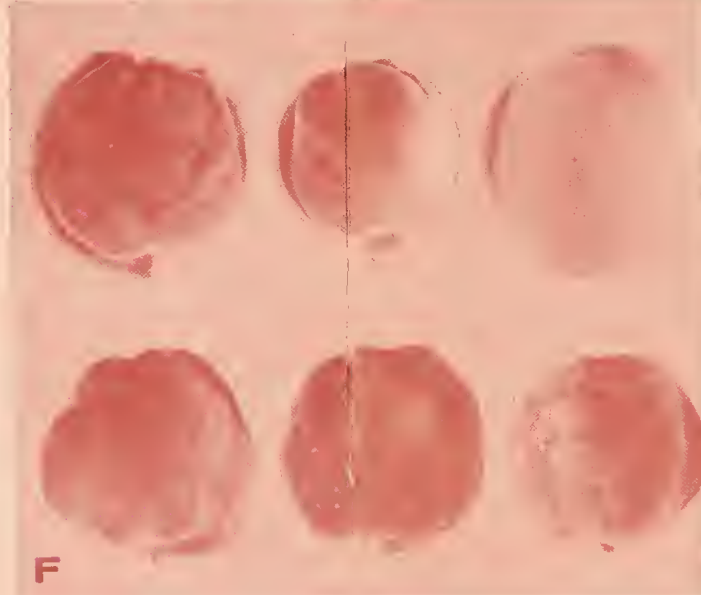


RETARDED DEVELOPMENT OF FOLIAGE

C. Spring. Growth on left branch normal. Growth on other branches retarded by mosaic.

D. Summer. Growth on branches at right retarded. Growth normal on branches at left.

BN-3496, BN-3497



SHORTENED SPACES BETWEEN STEMS

E. Winter. Twig at right mosaic infected. Twig at left normal.

ROUGH, BUMPY FRUIT

F. Mosaic-affected peaches. Peach at upper right is normal.

BN-3493, BN-3494

Inspection

Federal and State inspectors inspect every peach tree in commercial orchards in the quarantine areas every year. They also inspect trees outside the areas. They make the inspections in the spring as soon as leaf development permits symptoms of the disease to be recognized.

When inspectors find a case of peach mosaic in a noninfected county or State, they notify the grower, and report the infection to the State Regulatory Officer, who places the area under quarantine.

Care of orchards

When an inspector reports to you that there is peach mosaic in your orchard, you should delimb the infected trees at once. Remove the infected stumps as soon as possible after delimbing. It is as important to remove trees showing mild symptoms of the disease as it is to remove severely infected trees. All brush should be burned.

Trees in an orchard should be kept in a vigorous condition. Old, weak, abandoned, and nonprofitable trees harbor pests, and should be removed.

Prepared by the Plant Pest Control Division
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